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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: LACTOBACILLUS INERS FOR THE ENHANCEMENT OF UROGENITAL HEALTH

(57) Abstract: The present invention provides methods and compositions for administration of Lactobacillus iners alone or together with at least one other probiotic organism such as Bifodobacterium, or another Lactobacillus for reduction of the risk of urogenital infection and concomitant restoration and/or maintenance of a healthy urogenital flora. A method of treatment of vaginal infections is also contemplated.

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 A61K35/74 A61F A61P31/04 A61P15/02 A61P1/00 According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 **A61K** Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data, PAJ, BIOSIS, MEDLINE, EMBASE .C. DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. Category ° 1-19 E. FALSEN ET AL.: "Phenotypic and Υ phylogenetic characterization of a novel Lactobacillus species from human sources: description of Lactobacillus iners sp. INTERNATIONAL JOURNAL OF SYSTEMATIC BACTERIOLOGY, vol. 49, no. 1, January 1999 (1999-01), pages 217-221, XP008019383 cited in the application page 217, left-hand column, bottom line page 221, left-hand column, line 27 - line WO 00 35465 A (UREX BIOTECH INC) 1 - 19Υ 22 June 2000 (2000-06-22) page 11, line 21 - line 23; claims Patent family members are listed in annex. Further documents are listed in the continuation of box C. Special categories of cited documents: *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the "A" document defining the general state of the art which is not considered to be of particular relevance invention "E" earlier document but published on or after the international "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the all *O* document referring to an oral disclosure, use, exhibition or document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of mailing of the international search report Date of the actual completion of the international search 17/07/2003 8 July 2003

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT Category Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No.								
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Nelevali to dalii No.						
Y	WO 93 09793 A (REID GREGOR ;WATT BRUCE ANDREW (CA)) 27 May 1993 (1993-05-27) claims	1-19						
P,A	J.P. BURTON ET AL.: "Improved understanding of the bacterial vaginal microbiota of women before and after probiotic instillation." APPLIED AND ENVIRONMENTAL MICRIBIOLOGY, vol. 69, no. 1, January 2003 (2003-01), pages 97-101, XP002246840 the whole document	1-19						
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national application No. PCT/CA 03/00443

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)
This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:
1. X Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
Although claims 1-14, 17 and 18 (both as far as being dependent on claim 7) and 19 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)
This International Searching Authority found multiple inventions in this international application, as follows:
As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
Remark on Protest The additional search fees were accompanied by the applicant's protest. No protest accompanied the payment of additional search fees.

nal Application No PCT/CA 03/00443

	Patent document cited in search report		Publication date	Patent family member(s)		Publication date
W	0 0035465	Α	22-06-2000	AU	1543400 A	03-07-2000
· · · · · ·	• • • • • • • • • • • • • • • • • • • •			BR	9916062 A	24-09-2002
				CA	2354054 A1	22-06-2000
				WO	0035465 A2	22-06-2000
				ΕP	1137423 A2	04-10-2001
				PL	348973 A1	17-06-2002
				TR	200101699 T2	21-06-2002
				US	6479051 B1	12-11-2002
- W	0 9309793	Α	27-05-1993	GB	2261372 A	19-05-1993
i ·	0 3003.70	• •	_, _,	ΑT	218062 T	15-06-2002
				ΑU	2920592 A	15-06-1993
				CA	2123709 A1	27-05-1993
				WO	9309793 A1	27-05-1993
l'.		. •		DE	69232621 D1	04-07-2002
	e de la companya del companya de la companya del companya de la co			DE	69232621 T2	13-02-2003
[]				DΚ	613374 T3	23-09-2002
				ĒΡ	0613374 A1	07-09-1994
				ES	2173872 T3	01-11-2002
				US	5645830 A	08-07-1997
				US	6004551 A	21-12-1999